

REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the Final Office Action of March 7, 2007. Applicant respectfully submits that the pending claims are in condition for allowance for at least the reasons discussed herein.

The Section 102 Rejection

Claims 1-3, 5-7, 9, 11-14, 16, 18-20, 22, 24 and 26-30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 6,862,432 to Kim (hereinafter "Kim"). *See* Final Office Action, page 2. Applicant respectfully submits that many of the recitations of these claims are neither disclosed nor suggested by the cited references. For example, independent Claim 1 recites:

A portable electronic device, comprising:
a housing;
an antenna associated with the housing; and
a multi-mode matching circuit operatively associated with the antenna, the multi-mode matching circuit being configured to operate in a first mode when the housing of the portable electronic device is in a first configuration and in a second mode when the housing of the portable electronic device is in a second configuration;
a sensor operatively associated with the multi-mode matching circuit, wherein the sensor is configured to detect the first configuration of the housing of the portable electronic device and/or the second configuration of the housing of the portable electronic device and wherein the multi-mode matching circuit is configured to adjust at least one parameter of the multi-mode matching circuit responsive to the first and/or second detected configurations of the housing of the portable electronic device, and wherein the at least one parameter is stored in a lookup table; and
a processor operatively associated with the sensor, the processor being configured to locate the at least one parameter in the lookup table using the first and/or second detected configuration of the housing of the portable electronic device as a pointer for an entry in the lookup table.

Independent Claims 7, 14 and 22 include similar recitations to the highlighted recitations of Claim 1. Applicant respectfully submits that at least the highlighted recitations of amended Claim 1 are neither disclosed nor suggested by any of the cited reference for at least the reasons discussed herein.

The Final Office Action states that Kim teaches all of the recitations of Claim 1. *See* Final Office Action, pages 2-3. In particular, Kim discusses a folder sensor 20 that determines if the housing is open or closed. A voltage value corresponding to the state of housing (open or closed) is stored in memory and the voltage is used to control the matching

circuit. *See* Kim, column 4, lines 2-10. In other words, Kim discusses storing one or more voltages in a memory. Thus, the solution discussed in Kim is specific to stored voltages and use of variable capacitance diodes.

In stark contrast, Claim 1 recites a multi-mode matching circuit that is configured to adjust at least one parameter of the multi-mode matching circuit and storing the at least one parameter in a lookup table. Thus, the multi-mode matching circuit according to some embodiments of the present invention may include digitally programmable Resistors (R), Inductors (L), or Capacitors (C), which may be programmed based upon numerical values ("parameters") stored in a lookup table (not voltages). In other words, the parameters stored in the lookup table pointed to by the first and/or second detected configuration of the housing are the numerical values used to program the resistors, inductors and/or capacitors of the multi-mode matching circuit as needed.

Accordingly, Applicant respectfully submits that independent Claims 1, 7, 14 and 22 are patentable over Kim for at least the reasons discussed herein. Furthermore, the dependent Claims are patentable at least per the patentability of the independent base claims from which they depend.

The Section 103 Rejections

Claims 31-33 and 35-36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of United States Patent Application Publication No. 2004/0185920 to Choi *et al.* (hereinafter "Choi"). *See* Final Office Action, page 6. The Final Office Action admits that "Kim does not expressly disclose there are at least three configurations of the housing with corresponded [sic] three modes." *See* Final Office Action, page 6. However, the Final Office Action points to Choi as providing the missing teachings. *See* Final Office Action, page 6. Applicant respectfully submits that many of the recitations of these claims are neither disclosed nor suggested by the cited combination. For example, Claim 31

A portable electronic device, comprising:

a housing;

an antenna associated with the housing;

a multi-mode matching circuit operatively associated with the antenna, **the multi-mode matching circuit being configured to operate in at least three modes corresponding to respective first through third configurations of the housing.**

Claim 35 contains corresponding method recitations to the highlighted recitations of Claim 31. Applicant respectfully submits that at least the highlighted recitations of Claim 31 are neither disclosed nor suggested by the cited combination for at least the reasons discussed herein.

Choi discusses a method and apparatus for detecting a position of a folder in a rotation touch phone having a camera. *See* Choi, title. As discussed in Choi, this reference discusses a phone having four states, which can be sensed by three sensors. *See* Choi, Abstract. As illustrated by Table 1 of Choi, the sensed states are used to determine which elements of the phone should be turned on and/or off. Nothing in Choi discloses or suggests a multi-mode matching circuit being configured to operate in at least three modes corresponding to respective first through third configurations of the housing as recited in Claim 31.

Furthermore, Applicant respectfully submits that there is no motivation or suggestion to combine the cited references as suggested in the Final Office Action. As affirmed by the Court of Appeals for the Federal Circuit in *In re Sang-su Lee*, a factual question of motivation is material to patentability, **and cannot be resolved on subjective belief and unknown authority**. *See In re Sang-su Lee*, 277 F.3d 1338 (Fed. Cir. 2002). It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 312-13 (Fed. Cir. 1983).

The Final Office Action, states:

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate at least three opening positions and modes taught by Choi et al. into the portable electronic device of Kim, in order to provide more modes with auto-detection.

See Final Office Action, page 6. Applicant respectfully disagrees. This motivation is, at most, a motivation based on "subjective belief and unknown authority," the type of motivation that was rejected by the Federal Circuit in *In re Sang-su Lee*. In other words, the Final Office Action does not point to any specific portion of the cited references that would induce one of skill in the art to combine the cited references as suggested in the Final Office Action. If the statement in the Final Office Action were adequate to sustain the Office's burden, then anything that would "provide more modes with auto-detection" would be rendered obvious. This cannot be the case. Accordingly, the statement in the Final Office

Action with respect to motivation does not adequately address the issue of motivation to combine as discussed in *In re Sang-su Lee*. Thus, it appears that the Final Office Action gains its alleged impetus or suggestion to combine the cited references by hindsight reasoning informed by Applicant's disclosure, which, as noted above, is an inappropriate basis for combining references.

Furthermore, Kim discussed impedance matching and Choi discusses detection positions of housings. One of skill in the art would not be motivated to combine these references as suggested in the Final Office Action.

Accordingly, Applicant respectfully submits that independent Claims 31 and 35 are patentable over the cited combination for at least these reasons. Furthermore, the dependent claims are patentable over the cited references at least per the patentability of the independent base claims from which they depend.

The Dependent Claims

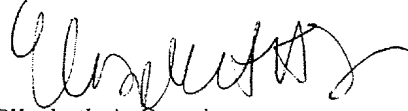
As discussed above, the dependent claims are patentable at least per the patentability of the independent claims from which they depend. For example, Claim 34 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of Choi and United States Patent Application Publication No. 2004/0110541 to Choo *et al.* (hereinafter "Choo"). *See* Final Office Action, page 7. Dependent Claim 34 further recites a camera device protruding from the portable electronic device that causes different configurations of the camera. The Final Office Action points to Choo as providing these additional teachings. *See* Final Office Action, page 8. As illustrated in Choo, for example, Figure 2, the photographic device 160 is integrated into the device such that it does not protrude. Therefore, Choo does not provide the teachings of a protruding camera that changes the configuration of the device as recited in Claim 34. Accordingly, Applicant respectfully submits that dependent Claim 34 is separately patentable over the cited references for at least these additional reasons.

CONCLUSION

In light of the above discussion, Applicant submits that the present application is in condition for allowance, which action is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

In re: Greg A. Dunko
Serial No.: 10/823,069
Filed: April 13, 2004
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Respectfully submitted,

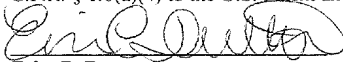


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CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.6(a)(4) to the U.S. Patent and Trademark Office on **May 7, 2007**.



Erin C. Dutton